

Complete Summary

GUIDELINE TITLE

Pelvic inflammatory disease. Sexually transmitted diseases treatment guidelines 2002.

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention. Pelvic inflammatory disease. Sexually transmitted diseases treatment guidelines. MMWR Recomm Rep 2002 May 10; 51(RR-6): 48-52.

GUIDELINE STATUS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

COMPLETE SUMMARY CONTENT

SCOPE
 METHODOLOGY - including Rating Scheme and Cost Analysis
 RECOMMENDATIONS
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 BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
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 INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
 CATEGORIES
 IDENTIFYING INFORMATION AND AVAILABILITY
 DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Pelvic inflammatory disease (PID) including any combination of the following:

- Endometritis
- Salpingitis
- Tubo-ovarian abscess
- Pelvic peritonitis

GUIDELINE CATEGORY

Diagnosis
 Evaluation

Management
Prevention
Treatment

CLINICAL SPECIALTY

Family Practice
Infectious Diseases
Internal Medicine
Obstetrics and Gynecology
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Managed Care Organizations
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To update the 1998 Guidelines for Treatment of Sexually Transmitted Diseases (MMWR 1998; 47[No. RR-1])
- To assist physicians and other health-care providers in preventing and treating sexually transmitted diseases (STDs)
- To present updated recommendations for the diagnosis and treatment of pelvic inflammatory disease (PID)

TARGET POPULATION

Women with suspected or confirmed pelvic inflammatory disease (PID)

INTERVENTIONS AND PRACTICES CONSIDERED

Note from the National Guideline Clearinghouse and the Centers for Disease Control and Prevention: These guidelines focus on the treatment and counseling of individual patients and do not address other community services and interventions that are important in sexually transmitted disease/human immunodeficiency virus (STD/HIV) prevention.

Diagnosis

1. Laparoscopy
2. Evaluation of signs and symptoms of pelvic inflammatory disease according to defined criteria:
 - Uterine/adnexal or cervical motion tenderness
 - Oral temperature >101 degrees F (>38.3 degrees C)

- Abnormal cervical or vaginal mucopurulent discharge
- Presence of white blood cells on saline microscopy of vaginal secretions
- Elevated erythrocyte sedimentation rate
- Elevated C-reactive protein
- Laboratory documentation of cervical infection with *N. gonorrhoeae* or *C. trachomatis*
- Histopathological evidence of endometriosis on endometrial biopsy
- Transvaginal sonography or magnetic resonance imaging techniques showing thickened fluid-filled tubes with or without free pelvic fluid or tubo-ovarian complex
- Laparoscopic abnormalities consistent with pelvic inflammatory disease

Treatment/Management

1. Hospitalization based upon observational and theoretical concerns
2. Parenteral regimen A
 - Cefotetan or cefoxitin plus doxycycline
 - Other second- or third-generation cephalosporins such as ceftizoxime, cefotaxime, ceftriaxone in place of cefotetan or cefoxitin
 - Clindamycin or metronidazole in addition to doxycycline
3. Parenteral regimen B
 - Clindamycin plus gentamicin intravenously
 - Doxycycline or clindamycin orally following intravenous therapy
4. Alternative parenteral regimens
 - Ofloxacin or levofloxacin with or without metronidazole
 - Ampicillin/sulbactam plus doxycycline
5. Oral treatment regimens

Regimen A

- Ofloxacin or levofloxacin with or without metronidazole

Regimen B

- Ceftriaxone intramuscularly once
 - Cefoxitin intramuscularly plus probenecid orally
 - Other parenteral third-generation cephalosporins (e.g., ceftizoxime or cefotaxime) plus doxycycline orally
 - Addition of metronidazole to above regimens
6. Alternative oral treatment regimens
 - Amoxicillin/clavulanic acid plus doxycycline
 - Azithromycin
 7. Patient follow-up
 8. Evaluation and treatment of sex partners
 9. Preventive screening for chlamydial infection in high-risk women
 10. Special considerations in pregnancy: hospitalization and parenteral antibiotics
 11. Special considerations in HIV infection

MAJOR OUTCOMES CONSIDERED

- Microbiologic cure

- Alleviation of signs and symptoms
- Prevention of sequelae
- Prevention of transmission

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Subjective Review

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Beginning in 2000, Centers for Disease Control and Prevention (CDC) personnel and professionals knowledgeable in the field of sexually transmitted diseases (STDs) systematically reviewed literature (i.e., published abstracts and peer-reviewed journal articles) concerning each of the major STDs, focusing on information that had become available since publication of the 1998 Guidelines for Treatment of Sexually Transmitted Diseases. Background papers were written and tables of evidence constructed summarizing the type of study (e.g., randomized controlled trial or case series), study population and setting, treatments or other interventions, outcome measures assessed, reported findings, and weaknesses and biases in study design and analysis. A draft document was developed on the basis of the reviews.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

Note from the National Guideline Clearinghouse and the Centers for Disease Control and Prevention: When more than one therapeutic regimen is recommended, the sequence is alphabetized unless the choices for therapy are prioritized based on efficacy, convenience, or cost. For sexually transmitted diseases (STDs) with more than one recommended regimen, almost all regimens have similar efficacy and similar rates of intolerance or toxicity unless otherwise specified.

Pelvic inflammatory disease (PID) comprises a spectrum of inflammatory disorders of the upper female genital tract, including any combination of endometritis, salpingitis, tubo-ovarian abscess, and pelvic peritonitis. Sexually transmitted organisms, especially *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, are implicated in many cases; however, microorganisms that comprise the vaginal flora (e.g., anaerobes, *Gardnerella vaginalis*, *Haemophilus influenzae*, enteric Gram-negative rods, and *Streptococcus agalactiae*) also have been associated with PID. In addition, cytomegalovirus (CMV), *Mycoplasma hominis*, and *Ureaplasma urealyticum* may be the etiologic agents in some cases of PID.

Diagnostic Considerations

Acute PID is difficult to diagnose because of the wide variation in the symptoms and signs. Many women with PID have subtle or mild symptoms. Delay in diagnosis and effective treatment probably contributes to inflammatory sequelae in the upper reproductive tract. Laparoscopy can be used to obtain a more accurate diagnosis of salpingitis and a more complete bacteriologic diagnosis. However, this diagnostic tool often is not readily available, and its use is not easy

to justify when symptoms are mild or vague. Moreover, laparoscopy will not detect endometritis and may not detect subtle inflammation of the fallopian tubes. Consequently, a diagnosis of PID usually is based on clinical findings.

The clinical diagnosis of acute PID is imprecise. Data indicate that a clinical diagnosis of symptomatic PID has a positive predictive value (PPV) for salpingitis of 65%--90% compared with laparoscopy. The positive predictive value of a clinical diagnosis of acute PID differs depending on epidemiologic characteristics and the clinical setting, with higher positive predictive value among sexually active young women (particularly adolescents) and among patients attending STD clinics or from settings in which rates of gonorrhea or chlamydia are high. In all settings, however, no single historical, physical, or laboratory finding is both sensitive and specific for the diagnosis of acute PID (i.e., can be used both to detect all cases of PID and to exclude all women without PID). Combinations of diagnostic findings that improve either sensitivity (i.e., detect more women who have PID) or specificity (i.e., exclude more women who do not have PID) do so only at the expense of the other. For example, requiring two or more findings excludes more women who do not have PID but also reduces the number of women with PID who are identified.

Many episodes of PID go unrecognized. Although some cases are asymptomatic, others are undiagnosed because the patient or the health-care provider fails to recognize the implications of mild or nonspecific symptoms or signs (e.g., abnormal bleeding, dyspareunia, and vaginal discharge). Because of the difficulty of diagnosis and the potential for damage to the reproductive health of women even by apparently mild or atypical PID, health-care providers should maintain a low threshold for the diagnosis of PID.

The optimal treatment regimen and long-term outcome of early treatment of women with asymptomatic or atypical PID are unknown. The following recommendations for diagnosing PID are intended to help health-care providers recognize when PID should be suspected and when they need to obtain additional information to increase diagnostic certainty. Diagnosis and management of other common causes of lower abdominal pain (e.g., ectopic pregnancy, acute appendicitis, and functional pain) are unlikely to be impaired by initiating empiric antimicrobial therapy for PID.

Empiric treatment of PID should be initiated in sexually active young women and other women at risk for STDs if the following minimum criteria are present and no other cause(s) for the illness can be identified:

- uterine/adnexal tenderness
- cervical motion tenderness

Requiring all minimum criteria may result in low sensitivity in patients at high risk for infection. In patients with both pelvic tenderness and signs of lower genital tract inflammation, the diagnosis of PID should be considered. Treatment may be indicated based on a patient's risk profile.

More elaborate diagnostic evaluation often is needed, because incorrect diagnosis and management might cause unnecessary morbidity. These additional criteria

may be used to enhance the specificity of the minimum criteria. Additional criteria that support a diagnosis of PID include the following:

- oral temperature >101 degrees F (>38.3 degrees C)
- abnormal cervical or vaginal mucopurulent discharge
- presence of white blood cells (WBCs) on saline microscopy of vaginal secretions
- elevated erythrocyte sedimentation rate
- elevated C-reactive protein
- laboratory documentation of cervical infection with *N. gonorrhoeae* or *C. trachomatis*

Most women with PID have either mucopurulent cervical discharge or evidence of white blood cells on a microscopic evaluation of a saline preparation of vaginal fluid. If the cervical discharge appears normal and no white blood cells are found on the wet prep, the diagnosis of PID is unlikely, and alternative causes of pain should be investigated.

The most specific criteria for diagnosing PID include the following:

- endometrial biopsy with histopathologic evidence of endometritis
- transvaginal sonography or magnetic resonance imaging techniques showing thickened, fluid-filled tubes with or without free pelvic fluid or tubo-ovarian complex
- laparoscopic abnormalities consistent with PID

A diagnostic evaluation that includes some of these more extensive studies may be warranted in certain cases.

Treatment

PID treatment regimens must provide empiric, broad-spectrum coverage of likely pathogens. Antimicrobial coverage should include *N. gonorrhoeae*, *C. trachomatis*, anaerobes, Gram-negative facultative bacteria, and streptococci. Several antimicrobial regimens have been effective in achieving clinical and microbiologic cure in randomized clinical trials with short-term follow-up. However, few investigations have assessed and compared these regimens with regard to elimination of infection in the endometrium and fallopian tubes or determined the incidence of long-term complications (e.g., tubal infertility and ectopic pregnancy) of antimicrobial regimens.

All regimens should be effective against *N. gonorrhoeae* and *C. trachomatis*, because negative endocervical screening does not preclude upper reproductive tract infection. The need to eradicate anaerobes from women who have PID has not been determined definitively. Anaerobic bacteria have been isolated from the upper reproductive tract of women who have PID, and data from in vitro studies have revealed that certain anaerobes (e.g., *Bacteroides fragilis*) can cause tubal and epithelial destruction. In addition, bacterial vaginosis also is present in many women who have PID. Until treatment regimens that do not adequately cover these microbes have been demonstrated to prevent sequelae as successfully as the regimens that are effective against these microbes, the recommended regimens should provide anaerobic coverage. Treatment should be initiated as

soon as the presumptive diagnosis has been made, because prevention of long-term sequelae has been linked directly with immediate administration of appropriate antibiotics. When selecting a treatment regimen, health-care providers should consider availability, cost, patient acceptance, and antimicrobial susceptibility.

In the past, many specialists recommended that all patients who had PID be hospitalized so that bed rest and supervised treatment with parenteral antibiotics could be initiated. However, hospitalization is no longer synonymous with parenteral therapy. No currently available data compare the efficacy of parenteral with oral therapy or inpatient with outpatient treatment settings. The decision of whether hospitalization is necessary should be based on the discretion of the health-care provider.

The following criteria for hospitalization are based on observational data and theoretical concerns:

- surgical emergencies (e.g., appendicitis) cannot be excluded
- the patient is pregnant
- the patient does not respond clinically to oral antimicrobial therapy
- the patient is unable to follow or tolerate an outpatient oral regimen
- the patient has severe illness, nausea and vomiting, or high fever
- the patient has a tubo-ovarian abscess

No data are available that suggest that adolescent women benefit from hospitalization for treatment of PID. Whether women in their later reproductive years benefit from hospitalization for treatment of PID is also unclear, although women aged ≥ 35 years who are hospitalized with PID are more likely than are younger women to have a complicated clinical course.

Parenteral Treatment

No efficacy data compare parenteral with oral regimens. Many randomized trials have demonstrated the efficacy of both parenteral and oral regimens. Although most trials have used parenteral treatment for at least 48 hours after the patient demonstrates substantial clinical improvement, this time designation is arbitrary. Clinical experience should guide decisions regarding transition to oral therapy, which usually can be initiated within 24 hours of clinical improvement. Most clinicians recommend at least 24 hours of direct inpatient observation for patients who have tubo-ovarian abscesses, after which time home antimicrobial therapy is adequate.

Parenteral Regimen A

- Cefotetan 2 g intravenously every 12 hours

OR

- Cefoxitin 2 g intravenously every 6 hours

PLUS

- Doxycycline 100 mg orally or intravenously every 12 hours

Note: Because of pain associated with infusion, doxycycline should be administered orally when possible, even when the patient is hospitalized. Both oral and intravenous administration of doxycycline provide similar bioavailability.

Parenteral therapy may be discontinued 24 hours after a patient improves clinically, and oral therapy with doxycycline (100 mg twice a day) should continue to complete 14 days of therapy. When tubo-ovarian abscess is present, many health-care providers use clindamycin or metronidazole with doxycycline for continued therapy rather than doxycycline alone, because it provides more effective anaerobic coverage.

Clinical data are limited regarding the use of other second- or third-generation cephalosporins (e.g., ceftizoxime, cefotaxime, and ceftriaxone), which also may be effective therapy for PID and may replace cefotetan or cefoxitin. However, these cephalosporins are less active than cefotetan or cefoxitin against anaerobic bacteria.

Parenteral Regimen B

- Clindamycin 900 mg intravenously every 8 hours

PLUS

- Gentamicin loading dose intravenously or intramuscularly (2 mg/kg of body weight) followed by a maintenance dose (1.5 mg/kg) every 8 hours. Single daily dosing may be substituted.

Although use of a single daily dose of gentamicin has not been evaluated for the treatment of PID, it is efficacious in other analogous situations. Parenteral therapy can be discontinued 24 hours after a patient improves clinically; continuing oral therapy should consist of doxycycline 100 mg orally twice a day or clindamycin 450 mg orally four times a day to complete a total of 14 days of therapy. When tubo-ovarian abscess is present, many health-care providers use clindamycin for continued therapy rather than doxycycline, because clindamycin provides more effective anaerobic coverage.

Alternative Parenteral Regimens

Limited data support the use of other parenteral regimens, but the following three regimens have been investigated in at least one clinical trial, and they have broad spectrum coverage.

- Ofloxacin 400 mg intravenously every 12 hours

OR

- Levofloxacin 500 mg intravenously once daily

WITH or WITHOUT

- Metronidazole 500 mg intravenously every 8 hours

OR

- Ampicillin/Sulbactam 3 g intravenously every 6 hours

PLUS

- Doxycycline 100 mg orally or intravenously every 12 hours

Intravenous ofloxacin has been investigated as a single agent; however because of concerns regarding its spectrum, metronidazole may be included in the regimen. Preliminary data suggest that levofloxacin is as effective as ofloxacin and may be substituted; its single daily dosing makes it advantageous from a compliance perspective. Ampicillin/sulbactam plus doxycycline has good coverage against *C. trachomatis*, *N. gonorrhoeae*, and anaerobes and is effective for patients who have tubo-ovarian abscess.

Oral Treatment

As with parenteral regimens, clinical trials of outpatient regimens have provided minimal information regarding intermediate and long-term outcomes. The following regimens provide coverage against the frequent etiologic agents of PID, but evidence from clinical trials supporting their use is limited. Patients who do not respond to oral therapy within 72 hours should be reevaluated to confirm the diagnosis and should be administered parenteral therapy on either an outpatient or inpatient basis.

Regimen A

- Ofloxacin 400 mg orally twice a day for 14 days

OR

- Levofloxacin 500 mg orally once daily for 14 days

WITH or WITHOUT

- Metronidazole 500 mg orally twice a day for 14 days

Oral ofloxacin has been investigated as a single agent in two well-designed clinical trials, and it is effective against both *N. gonorrhoeae* and *C. trachomatis*. Despite the results of these trials, lack of anaerobic coverage with ofloxacin is a concern; the addition of metronidazole to the treatment regimen provides this coverage. Preliminary data suggest that levofloxacin is as effective as ofloxacin and may be substituted; its single daily dosing makes it advantageous from a compliance perspective.

Regimen B

- Ceftriaxone 250 mg intramuscularly in a single dose

OR

- Cefoxitin 2 g intramuscularly in a single dose and Probenecid, 1 g orally administered concurrently in a single dose

OR

- Other parenteral third-generation cephalosporin (e.g., ceftizoxime or cefotaxime)

PLUS

- Doxycycline 100 mg orally twice a day for 14 days

WITH or WITHOUT

- Metronidazole 500 mg orally twice a day for 14 days

The optimal choice of a cephalosporin for Regimen B is unclear; although cefoxitin has better anaerobic coverage, ceftriaxone has better coverage against *N. gonorrhoeae*. Clinical trials have demonstrated that a single dose of cefoxitin is effective in obtaining short-term clinical response in women who have PID; however, the theoretical limitations in its coverage of anaerobes may require the addition of metronidazole to the treatment regimen. The metronidazole also will effectively treat bacterial vaginosis, which is frequently associated with PID. No data have been published regarding the use of oral cephalosporins for the treatment of PID. Limited data suggest that the combination of oral metronidazole plus doxycycline after primary parenteral therapy is safe and effective.

Alternative Oral Regimens

Although information regarding other outpatient regimens is limited, one other regimen has undergone at least one clinical trial and has broad spectrum coverage. Amoxicillin/clavulanic acid plus doxycycline was effective in obtaining short-term clinical response in a single clinical trial; however, gastrointestinal symptoms might limit compliance with this regimen. Several recent investigations have evaluated the use of azithromycin in the treatment of upper reproductive tract infections; however, the data are insufficient to recommend this agent as a component of any of the oral treatment regimens for PID.

Follow-Up

Patients should demonstrate substantial clinical improvement (e.g., defervescence; reduction in direct or rebound abdominal tenderness; and reduction in uterine, adnexal, and cervical motion tenderness) within 3 days after initiation of therapy. Patients who do not improve within this period usually require hospitalization, additional diagnostic tests, and surgical intervention.

If the health-care provider prescribes outpatient oral or parenteral therapy, a follow-up examination should be performed within 72 hours using the criteria for clinical improvement described previously. If the patient has not improved, hospitalization for parenteral therapy and further evaluation are recommended. Some specialists also recommend rescreening for *C. trachomatis* and *N. gonorrhoeae* 4--6 weeks after therapy is completed in women with documented infection with these pathogens.

Management of Sex Partners

Male sex partners of women with PID should be examined and treated if they had sexual contact with the patient during the 60 days preceding the patient's onset of symptoms. Evaluation and treatment are imperative because of the risk for reinfection of the patient and the strong likelihood of urethral gonococcal or chlamydial infection in the sex partner. Male partners of women who have PID caused by *C. trachomatis* and/or *N. gonorrhoeae* often are asymptomatic.

Sex partners should be treated empirically with regimens effective against both of these infections, regardless of the etiology of PID or pathogens isolated from the infected woman. Even in clinical settings in which only women are treated, arrangements should be made to provide care for male sex partners of women who have PID. When this is not feasible, health-care providers should ensure that sex partners are referred for appropriate treatment.

Prevention

Prevention of chlamydial infection by screening and treating high-risk women reduces the incidence of PID. Theoretically, most cases of PID can be prevented by screening all women or those determined to be at high-risk (based on age or other factors) using deoxyribonucleic acid (DNA) amplification on cervical specimens (in women receiving pelvic exams) and on urine (in women not undergoing exams). Although bacterial vaginosis is associated with PID, whether the incidence of PID can be reduced by identifying and treating women with bacterial vaginosis is unclear.

Special Considerations

Pregnancy

Because of the high risk for maternal morbidity, fetal wastage, and preterm delivery, pregnant women who have suspected PID should be hospitalized and treated with parenteral antibiotics.

HIV Infection

Differences in the clinical manifestations of PID between HIV-infected women and HIV-negative women have not been well delineated. In early observational studies, HIV-infected women with PID were more likely to require surgical intervention. In recent, more comprehensive observational and controlled studies, HIV-infected women with PID had similar symptoms when compared with uninfected controls. They were more likely to have a tubo-ovarian abscess, but

responded equally well to standard parenteral and oral antibiotic regimens when compared with HIV-negative women. The microbiologic findings for HIV-positive and HIV-negative women were similar, except for a) higher rates of concomitant *M. hominis*, candida, streptococcal, and human papilloma virus (HPV) infections and b) human papilloma virus-related cytologic abnormalities among those with HIV infection. Whether the management of immunodeficient HIV-infected women with PID requires more aggressive interventions (e.g., hospitalization or parenteral antimicrobial regimens) has not been determined.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

Throughout the 2002 guideline document, the evidence used as the basis for specific recommendations is discussed briefly. More comprehensive, annotated discussions of such evidence will appear in background papers that will be published in a supplement issue of the journal *Clinical Infectious Diseases*.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Improved accurate diagnosis of pelvic inflammatory disease (PID)
- Reduction in damage to reproductive health of women by pelvic inflammatory disease (e.g., tubal infertility, ectopic pregnancy)
- Prevention of transmission of gonococcal or chlamydial infections to sex partners
- Prevention of maternal morbidity, fetal wastage, and preterm delivery in pregnant women with pelvic inflammatory disease

Subgroups Most Likely to Benefit:

- Pregnant women
- Women with pelvic inflammatory disease (PID) who wish to become pregnant in the future

POTENTIAL HARMS

- Doxycycline is associated with pain during infusion
- Amoxicillin/clavulanic acid plus doxycycline can cause gastrointestinal symptoms

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These recommendations were developed in consultation with public- and private-sector professionals knowledgeable in the treatment of patients with sexually transmitted diseases (STDs). They are applicable to various patient-care settings, including family planning clinics, private physicians' offices, managed care organizations, and other primary-care facilities. When using these guidelines, the disease prevalence and other characteristics of the medical practice setting should be considered. These recommendations should be regarded as a source of clinical guidance and not as standards or inflexible rules. These guidelines focus on the treatment and counseling of individual patients and do not address other community services and interventions that are important in sexually transmitted disease/human immunodeficiency virus (STD/HIV) prevention.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Personal Digital Assistant (PDA) Downloads

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Centers for Disease Control and Prevention. Pelvic inflammatory disease. Sexually transmitted diseases treatment guidelines. MMWR Recomm Rep 2002 May 10; 51(RR-6): 48-52.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1993 (revised 2002 May 10)

GUIDELINE DEVELOPER(S)

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

GUIDELINE DEVELOPER COMMENT

These guidelines for the treatment of patients who have sexually transmitted diseases (STDs) were developed by the Centers for Disease Control and Prevention (CDC) after consultation with a group of professionals knowledgeable in the field of STDs who met in Atlanta on September 26--28, 2000.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Not stated

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the [Centers for Disease Control and Prevention \(CDC\) Web site](#).

Print copies: Available from the Centers for Disease Control and Prevention, MMWR, Atlanta, GA 30333. Additional copies can be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325; (202) 783-3238.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Workowski KA, Levine WC, Wasserheit JN. U.S. Centers for Disease Control and Prevention guidelines for the treatment of sexually transmitted diseases: an opportunity to unify clinical and public health practice. *Ann Intern Med*. 2002 Aug 20; 137(4):255-62. Electronic copies: Available through [Annals of Internal Medicine Online](#).
- Sexually Transmitted Diseases Treatment Guidelines 2002 for PDA or Palm OS. Available from the [CDC National Prevention Information Network \(NPIN\) Web site](#).

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on August 19, 2002.

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